

2018-2019 Pacing Guide
Accelerated GSE Geometry B/Algebra II

#Days	Dates	Topics	Standards
10	Aug 9 - Aug 22	Unit 1A - Right Triangle Trigonometry Define trigonometric ratios and solve problems involving right triangles.	MGSE9-12.G.SRT.6 MGSE9-12.G.SRT.7 MGSE9-12.G.SRT.8
26	Aug 23 - Sept 28	Unit 1B Circles and Volume Students will understand and apply theorems about circles, find arc lengths of circles, and find areas of sectors of circles. Students will develop and explain formulas related to circles and the volume of solid figures and use the formulas to solve problems. Building on standards from middle school, students will extend the study of identifying cross-sections of three-dimensional shapes to identifying three-dimensional objects generated by rotations of two-dimensional objects.	MGSE9-12.G.C.1 MGSE9-12.G.C.2 MGSE9-12.G.C.3 MGSE9-12.G.C.4 MGSE9-12.G.C.5 MGSE9-12.G.GMD.1 MGSE9-12.G.GMD.2 MGSE9-12.G.GMD.3 MGSE9-12.G.GMD.4
18	Oct 1- 26	Unit 2 – Geometric and Algebraic Connections Students will verify algebraically geometric relationships of circles in the coordinate plane. Students will derive the equation of a circle and model real-world objects using geometric shapes and concepts.	MGSE9-12.G.GPE.1 MGSE9-12.G.GPE.4 MGSE9-12.G.MG.1 MGSE9-12.G.MG.2 MGSE9-12.G.MG.3
15	Oct 29 - Nov 16	Unit 3 – Applications of Probability Students will understand independence and conditional probability and use them to interpret data. Building on standards from middle school, students will formalize the rules of probability and use the rules to compute probabilities of compound events in a uniform probability model.	MGSE9-12.S.CP.1 MGSE9-12.S.CP.2 MGSE9-12.S.CP.3 MGSE9-12.S.CP.4 MGSE9-12.S.CP.5 MGSE9-12.S.CP.6 MGSE9-12.S.CP.7
10	Nov 26 - Dec 7	EOC Review and Test	
13	Dec 10 - 21	Unit 4 – Quadratics Revisited Students will revisit solving quadratic equations in this unit. Students learn that when quadratic equations do not have real solutions the number system must be extended so that solutions exist, analogous to the way in which extending the whole numbers to the negative numbers allows $x+1 = 0$ to have a solution. Students explore relationships between number systems: whole numbers, integers, rational numbers, real numbers, and complex numbers. Students will perform operations with complex numbers and solve quadratic equations with complex solutions. The guiding principle is that equations with no solutions in one number system may have solutions in a larger number system. Students will also extend the laws of exponents to rational exponents and use those properties to evaluate and simplify expressions containing rational exponents.	MGSE9-12.N.CN.1 MGSE9-12.N.CN.2 MGSE9-12.N.CN.3 MGSE9-12.N.CN.7 MGSE9-12.N.CN.8 MGSE9-12.A.REI.4 MGSE9-12.A.REI.4b MGSE9-12.N.RN.1 MGSE9-12.N.RN.2

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16	Jan 7 - 29	<p>Unit 5 – Operations with Polynomials</p> <p>This unit develops the structural similarities between the system of polynomials and the system of integers. Students draw on analogies between polynomial arithmetic and base-ten computation, focusing on properties of operations, particularly the distributive property. Students connect multiplication of polynomials with multiplication of multi-digit integers, and division of polynomials with long division of integers. Students will find inverse functions and verify by composition that one function is the inverse of another function.</p>	<p>MGSE9-12.A.APR.1 MGSE9-12.A.APR.5 MGSE9-12.A.APR.6 MGSE9-12.F.BF.1 MGSE9-12.F.BF.1b MGSE9-12.F.BF.1c MGSE9-12.F.BF.4 MGSE9-12.F.BF.4a MGSE9-12.F.BF.4b MGSE9-12.F.BF.4c</p>
24	Jan 30 - March 1	<p>Unit 6 – Polynomial Functions</p> <p>In this unit, students continue their study of polynomials by identifying zeros and making connections between zeros of a polynomial and solutions of a polynomial equation. Students will see how the Fundamental Theorem of Algebra can be used to determine the number of solutions of a polynomial equation and will find all the roots of those equations. Students will graph polynomial functions and interpret the key characteristics of the function.</p>	<p>MGSE9-12.N.CN.9 MGSE9-12.A.SSE.1 MGSE9-12.A.SSE.1a MGSE9-12.A.SSE.1b MGSE9-12.A.SSE.2 MGSE9-12.A.APR.2 MGSE9-12.A.APR.3 MGSE9-12.A.APR.4 MGSE9-12.F.IF.4 MGSE9-12.F.IF.7 MGSE9-12.F.IF.7c</p>
20	March 4 - March 29	<p>Unit 7 – Rational and Radical Relationships</p> <p>Rational numbers extend the arithmetic of integers by allowing division by all numbers except 0. Similarly, rational expressions extend the arithmetic of polynomials by allowing division by all polynomials except the zero polynomial. A central theme of this unit is that the arithmetic of rational expressions is governed by the same rules as the arithmetic of rational numbers. Similarly, radical expressions follow the rules governed by irrational numbers.</p>	<p>MGSE9-12.A.APR.7 MGSE9-12.A.CED.1 MGSE9-12.A.CED.2 MGSE9-12.A.REI.2 MGSE9-12.F.IF.4 MGSE9-12.F.IF.5 MGSE9-12.F.IF.7 MGSE9-12.F.IF.7b MGSE9-12.F.IF.7d</p>
29	April 8 - May 16	<p>Unit 8 – Exponential and Logarithms</p> <p>Students extend their work with exponential functions to include solving exponential equations with logarithms. They analyze the relationship between these two functions.</p>	<p>MGSE9-12.A.SSE.3 MGSE9-12.A.SSE.3c MGSE9-12.F.IF.7 MGSE9-12.F.IF.7e MGSE9-12.F.IF.8 MGSE9-12.F.IF.8b MGSE9-12.F.BF.5 MGSE9-12.F.LE.4</p>
3	May 17-21	Final Exams	

Standards of Mathematical Practice

- 1 Make sense of problems and persevere in solving them.
- 2 Reason abstractly and quantitatively.
- 3 Construct viable arguments and critique the reasoning of others.
- 4 Model with mathematics.
- 5 Use appropriate tools strategically.
- 6 Attend to precision.
- 7 Look for and make use of structure.
- 8 Look for and express regularity in repeated reasoning.